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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

ABELSON, RONALD B

ART UNIT	PAPER NUMBER
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2666

15

DATE MAILED: 11/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/187,370

Applicant(s)

WILCOXSON ET AL.

Examiner

Ronald Abelson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,6-10,17 and 19-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6-10,17,19-22 and 24 is/are rejected.
- 7) ☐ Claim(s) 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 6-10, 17, 19, 20, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olds (5,574,969) in view of Watanabe (US 4,052,670) and Montpetit (US 6,366,761).

Regarding claims 1 and 19, Olds teaches a method and apparatus for interference management of a communications satellite serving multiple user terminals in a satellite based cellular communications system (fig. 1).

Regarding claims 1 and 19, the system comprises receiving a request for service from a user terminal (col. 9 lines 23 - 26).

Regarding claims 1 and 19, the system comprises accessing a database parameter of communications system parameters including user terminal database parameter (fig. 6 box 98, col. 9 lines 58-59), antenna pattern parameters (antenna pattern, col. 10

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lines 1-4), spacecraft/antenna point error parameters (Doppler frequency shift, col. 10 lines 1-4). Note, the Doppler frequency error can be due to movement of the antenna.

Regarding claims 1 and 19, the system applies an algorithm to at least one communications system parameter to determine a connection parameter to minimize intra-system interference based in part upon the database of communications system parameters for the user terminal (non-interfering channel is chosen, col. 10 lines 1-4).

Regarding claims 1 and 19, the system allocates the connection and makes the connection (fig. 6 box 100, col. 10 lines 1-4).

Regarding claim 19, the system allocates the frequency channel and timeslot parameter in addition to making the connection (fig. 6 box 100, col. 10 lines 1-4).

Regarding claim 19, the system periodically determines the frequency channel and time slot to minimize intra-system interference (dynamically assigned in real-time, col. 2 lines 21-24).

Regarding claim 19, the system updates databases (fig. 3 box 42, lines 44-47).

Olds is silent on link condition parameters.

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Watanabe teaches link condition parameters (col. 1 lines 15-24).

Therefore it would have been obvious to one of ordinary skill in the art, having both Olds and Watanabe before him/her and with the teachings [a] as shown by Olds, an interference management of a communications satellite serving multiple user terminals in a satellite based cellular communications system, and [b] as shown by Watanabe, the link condition affects the timeslot/frequency channel assignment, to be motivated to modify the system of Olds by not transmitting at a frequency over 10 GHz during in areas where it is raining. This would improve the system since the signal is attenuated by rain.

As previously mentioned, although Olds teaches accessing a database parameter of communications system parameters including user terminal database parameter (fig. 6 box 98, col. 9 lines 58-59), the reference is silent on prioritizing the multiple user terminals according to a selected criteria.

Montpetit teaches in a satellite system prioritizing the multiple user terminals according to a selected criteria (quality of service, col. 5 lines 43-46, 57-61).

Therefore it would have been obvious to one of ordinary skill in the art, having both the combination of Olds and Watanabe and Montpetit before him/her and with the teachings [a]

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as shown by the combination of Olds and Watanabe, an interference management of a communications satellite serving multiple user terminals in a satellite based cellular communications system, and [b] as shown by Montpetit, an interference management of a communications satellite serving multiple user terminals in a satellite based cellular communications system, to be motivated to modify the system of the combination of Olds and Watanabe by prioritizing different users according to the quality of service they desire. This can be accomplished by inserting a field in the packet header (Montpetit: fig. 4 box 53). This would improve the system by processing packets according to the service required by the user (Montpetit: col. 5 lines 57-61).

Regarding claim 6, monitoring if the communications connection is still active (Olds: fig. 6 box 94, col. 9 lines 23 - 26).

Regarding claim 7, redetermining the connection parameter based upon an updated communications system parameter (Olds: col. 10 lines 1-4).

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Regarding claim 8, the connection parameter is a frequency channel (Olds: channel, col. 10 lines 1-4).

Regarding claim 9, time slot assignment (Olds: col. 3 lines 43-44).

Regarding claim 10, updating the group of communications systems parameters after the communications connection ends (Olds: fig. 6 box 96, 92).

Regarding claim 17, redetermining the frequency channel and timeslot after a determination is made that the communications connection is still active (Olds: fig. 6 box 10).

Regarding claim 20, the plurality of communications system parameters comprises location of active user terminals and frequency channel and time slots allocated to the active users (Olds: fig. 4 see connections from satellites 52, 62, and 72 to users 56, 66, 76, fig. 6 box 100).

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Regarding claim 22, the examiner associates different QoS levels with different fee schedules.

3. Claims 21 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Olds (5,574,969), Watanabe (US 4,052,670), and Montpetit (US 6,366,761) as applied to claim 1 and 19 above, and further in view of Spaur (US 6,516,192).

Although the combination teaches prioritizing multiple users according to a selected criteria (Montpetit: quality of service, col. 5 lines 43-46, 57-61), it is silent on bandwidth being the criteria.

Spaur teaches in a satellite environment (col. 6 line 41) quality of service is bandwidth dependent.

Therefore it would have been obvious to one of ordinary skill in the art, having both the combination of Olds, Watanabe, and Montpetit and Spaur before him/her and with the teachings [a] as shown by the combination of Olds, Watanabe, and Montpetit, an interference management of a communications satellite serving multiple user terminals in a satellite based cellular communications system, and [b] as shown by Spaur, in a satellite environment quality of service is bandwidth dependent,

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to be motivated to modify the system of the combination of Olds, Watanabe, and Montpetit by including a quality of service parameter dependent upon the required bandwidth. This modification can be performed in software. This would improve the system since QoS is bandwidth dependent.

Regarding claim 24, see limitations previously listed in claims 21 and 22.

Allowable Subject Matter

4. Claim 23 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter.

Regarding claim 23, nothing in the prior art of the record teaches or fairly suggests prioritization based upon the amount of error correction selected by the user terminal, in combination with all the other limitations listed in the claim.

Response to Arguments

6. Applicant's arguments with respect to amended independent claims 1 and 19 have been considered but are moot in view of the

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new ground(s) of rejection. In light of the amendment to include prioritization (applicant pg. 7 lines 12-20).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Abelson whose telephone number is (703) 306-5622. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (703) 308-5463. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.


Ronald Abelson
Examiner
Art Unit 2666

November 12, 2003



MELVIN MARCELO
PRIMARY EXAMINER

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